Skills Demand
Computer and Mathematical Occupations
May 2025

Skills Demand

Employers request a variety of skills from job applicants. Some skills are termed as durable, or soft skills, such as *communication, creativity, critical thinking, emotional intelligence*, or *customer service.* Other skills are considered technical or hard skills, such as *sales, project management, computer science*, or *programming languages*. This brief explores skills requested by employers in their job postings for *Computer and Mathematical* occupations, and how the demand for these skills has changed over the last five years. Learning about in-demand skills help the potential workforce prepare for skills of today and may identify emerging trends for the future. It also helps ensure employers have the pool of talent they need to address increasing global competition and changing business needs.

In 2024, there were over 36,000 online job postings for *Computer and Mathematical* occupations in Missouri, a 38 percent decrease from approximately 58,650 postings in 2019. The following table shows top skills requested in *Computer and Mathematical* job postings in 2024, and how demand for those skills compared to the demand in 2019. Top requested skills in both years were *Communication, Management*, and *Computer Science*.
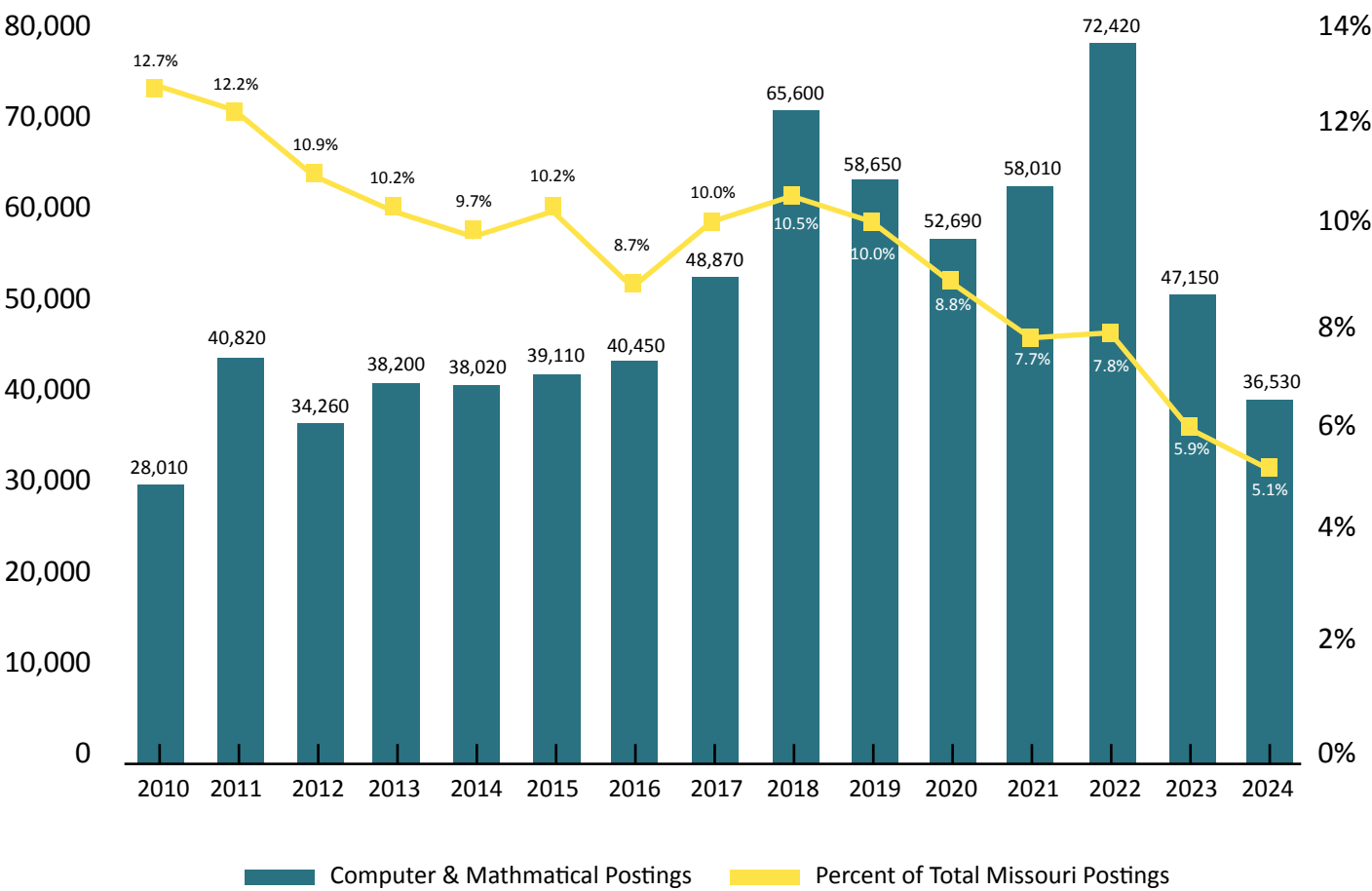
Computer and Mathematical Occupations Top Requested Skills 2024				
Skill or Qualification	**Online Job Postings 2024**	**Percent of Computer & Mathematical Postings 2024**	**Online Job Postings 2019**	**Percent of Computer & Mathematical Postings 2019**
Communication	15,280	42%	20,660	35%
Management	11,530	32%	16,120	27%
Computer Science	10,490	29%	15,140	26%
Problem Solving	9,480	26%	11,620	20%
Troubleshooting (Problem Solving)	8,950	25%	11,390	19%
Leadership	8,140	22%	9,810	17%
Operations	7,460	20%	9,540	16%
SQL (Programming Language)	6,520	18%	11,630	20%
Agile Methodology	6,480	18%	11,180	19%
Project Management	6,200	17%	8,530	15%
Total Computer & Mathematical Postings	**36,530**		**58,650**	

Source: Lightcast™

Skills Demand Trends

The number of postings for *Computer and Mathematical* occupations increased through 2022 before declining in 2023 and 2024. This follows a statewide trend of a larger number of job postings in 2022 compared to preceding and subsequent years. Job postings across all occupations increased 23 percent from 2021 to 2022, before returning to pre-2022 levels in 2023 and 2024. The ratio of *Computer and Mathematical* postings compared to total Missouri postings has decreased over time. In 2010, *Computer and Mathematical* postings made up 12.7 percent of total postings, while in 2024 that ratio dropped to 5.1 percent.

Computer and Mathematical Postings over Time

While the demand for some skills has remained relatively stable over time, demand for others increased or decreased in frequency. Looking at the ratio of skills requested in job postings can help identify which skills are increasing or decreasing in demand.

The percentage of *Computer and Mathematical* online job postings requesting *Communication* increased 6.6 percentage points from 2019 to 2024. Other skills that increased in demand included *Problem Solving* (6.1 percentage points), *Microsoft Azure* (5.8 percentage points), and *Leadership* (5.6 percentage points).

Top Increasing Skills in Computer and Mathematical Postings

Skill or Qualification	Online Job Postings 2024	Percent of Postings 2024	Online Job Postings 2019	Percent of Postings 2019	Percentage point Difference 2019-2024	Numeric Difference 2019-2024
Communication	15,280	41.8%	20,660	35.2%	6.6%	-5,380
Problem Solving	9,480	26.0%	11,620	19.8%	6.2%	-2,140
Microsoft Azure	3,920	10.7%	2,920	5.0%	5.7%	1,000
Leadership	8,140	22.3%	9,810	16.7%	5.6%	-1,670
Python (Programming Language)	5,400	14.8%	5,620	9.6%	5.2%	-220
Troubleshooting (Problem Solving)	8,950	24.5%	11,390	19.4%	5.1%	-2,440
Amazon Web Services	4,520	12.4%	4,530	7.7%	4.7%	-10
Operations	7,460	20.4%	9,540	16.3%	4.1%	-2,080
Innovation	4,290	11.7%	4,500	7.7%	4.0%	-210
Management	11,530	31.6%	16,120	27.5%	4.1%	-4,590
Total Computer & Mathematical Postings	**36,530**		**58,650**			

Source: Lightcast™

The ratio of postings requesting *Java skills* decreased from 17.1 percent in 2019 to 10.4 percent in 2024, a 6.7 percentage points decrease. Other skills that showed a decrease in frequency include *JavaScript* (-4.4 percentage points), *Web Services* (-3.7 percentage points), and *Management Information Systems* (-3.5 percentage points).
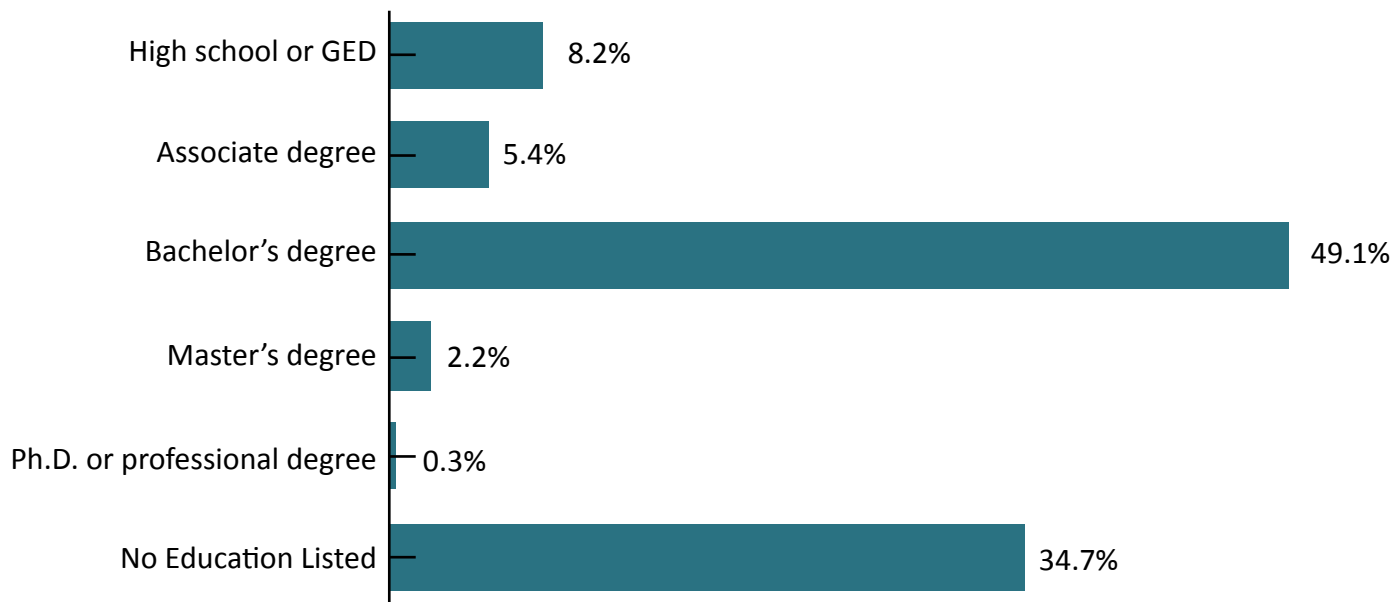
Top Decreasing Skills in Computer and Mathematical Postings

Skill or Qualification	Online Job Postings 2024	Percent of Postings 2024	Online Job Postings 2019	Percent of Postings 2019	Percentage point Difference 2019-2024	Numeric Difference 2019-2024
Java (Programming Language)	3,790	10.4%	10,030	17.1%	-6.7%	-6,240
JavaScript (Programming Language)	3,030	8.3%	7,420	12.7%	-4.4%	-4,390
Web Services	1,190	3.3%	4,090	7.0%	-3.7%	-2,900
Management Information Systems	1,340	3.7%	4,210	7.2%	-3.5%	-2,870
Unix	890	2.4%	3,240	5.5%	-3.1%	-2,350
Angular (Web Framework)	1,220	3.3%	3,710	6.3%	-3.0%	-2,490
Cascading Style Sheets (CSS)	1,460	4.0%	3,960	6.8%	-2.8%	-2,500
JQuery	400	1.1%	2,230	3.8%	-2.7%	-1,830
Extensible Markup Language (XML)	730	2.0%	2,680	4.6%	-2.6%	-1,950
C# (Programming Language)	1,860	5.1%	4,420	7.5%	-2.4%	-2,560
Total Computer & Mathematical Postings	**36,530**		**58,650**			

Source: Lightcast™
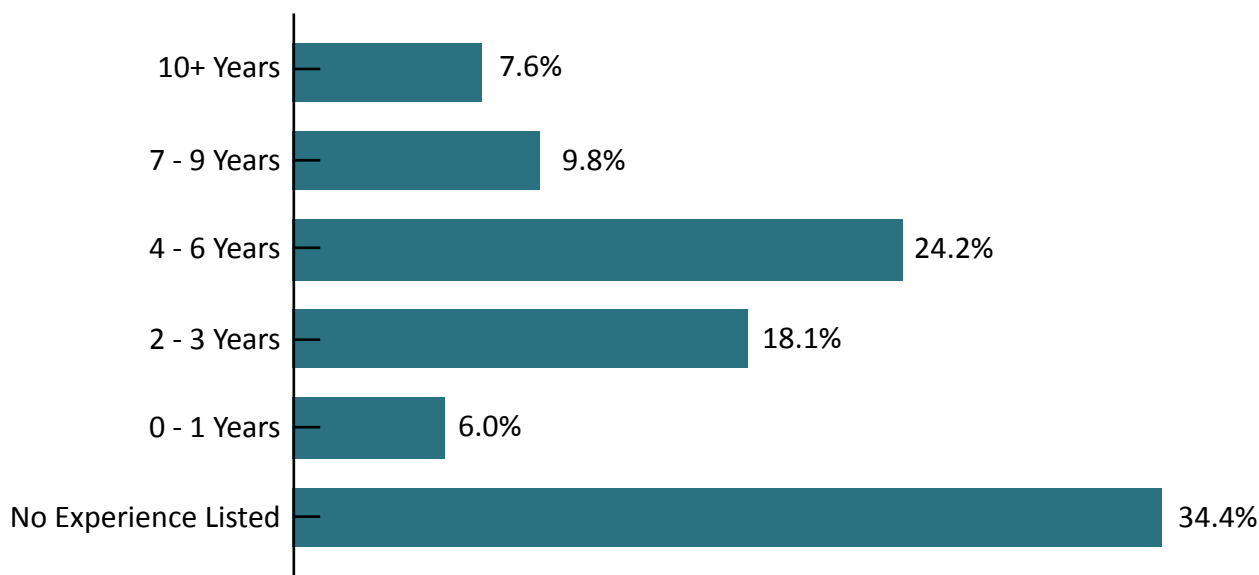
Education and Experience

Nearly half of job postings in 2024 for *Computer and Mathematical* occupations requested a bachelor's degree (49.1%), while 35 percent of online job postings did not specify an education level, while 31 percent of job postings did not list any experience requirement for the advertised positions, 25 percent requested experience of four to six years, and 20.5 percent requested two to three years of experience.

Minimum Education Level Requested in 2024 Online Job Postings

Education Level	Percent
High school or GED	8.2%
Associate degree	5.4%
Bachelor's degree	49.1%
Master's degree	2.2%
Ph.D. or professional degree	0.3%
No Education Listed	34.7%

Percent of total online Job Postings for *Computer and Mathematical* Occupations

Minimum Experience Requested in 2024 Online Job Postings

Experience	Percent
10+ Years	7.6%
7 - 9 Years	9.8%
4 - 6 Years	24.2%
2 - 3 Years	18.1%
0 - 1 Years	6.0%
No Experience Listed	34.4%

Percent of total online Job Postings for *Computer and Mathematical* Occupations

Employers also request certain qualifications in job ads, which are degrees, certifications, or licenses rather than specific skills. Qualifications often demonstrate knowledge and theoretical understanding, while skills are more about practical application and experience. Top qualifications requested in job ads include Security Clearances and Certified Information Systems Security Professional (CISSP).

Top Qualifications Requested in 2024 Computer and Mathmatical Postings	
Qualification	Online Job Postings
Security Clearance	1,450
Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)	1,250
Valid Driver's License	1,110
Certified Information Systems Security Professional	1,040
Secret Clearance	930
CompTIA A+	550
Certified Information Security Manager	480
Project Management Professional Certification	460
GIAC Certifications	430
Certified Information System Auditor (CISA)	410

Source: Lightcast™

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